In the Claims

Please cancel Claims 1-5 and 22.

Please amend Claims 6-14, 16, 18, 20. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - iii).

6. (Amended) A magnetic field sensor as described in Claim 8, wherein the detectable voltage signal is indicative of the rotation of a rotor.

7. (Twice Amended) A sensor as described in Claim 6, wherein the rotation of the rotor is indicative of a fluid flow, where the magnetic rotor is located in the flow path of, and is turned by, the flow of the fluid.

8. (Amended) A magnetic field sensor comprising a multilayer material, the multilayer material comprising a layer of a magnetostrictive material in contact with a layer of a piezoelectric material, and the multilayer material configured such that, when the magnetostrictive material is subjected to an alternating magnetic field, a change in at least one dimension of the magnetostrictive material induces a strain in, and produces a detectable voltage signal in, the piezoelectric material, and wherein during operation the magnetic field sensor does not consume any external electrical power.

9. (Amended) The magnetic field sensor as described in Claim 8, wherein the multilayer material comprises a second layer of magnetostrictive material positioned so that the layer of piezoelectric material lies between the two layers of magnetostrictive material.

10. (Amended) The magnetic field sensor as described in Claim 8, wherein the multilayer material comprises a second layer of piezoelectric material positioned so that the layer of magnetostrictive material lies between the two layers of piezoelectric material.

11. (Amended) A magnetic field sensor as described in Claim 8, wherein the detectable voltage signal is indicative of an electrical current in an electrical conductor.

12. (Amended) A magnetic field sensor as described in Claim 8, additionally comprising a high impedence readout circuit, connected to the layer of piezoelectric material, wherein a sensitivity of the sensor is proportional to a thickness of the piezoelectric layer and substantially independent of a surface area of the multilayer material.

13. (Amended) A magnetic field sensor as described in Claim 8, wherein the sensor is supported as a cantilever in which one end of the sensor is allowed to strain freely to thereby increase the sensitivity.

14. (Amended) A magnetic field sensor as described in Claim 8, wherein the layer of magnetostrictive material comprises a substrate.

16. (Amended) A magnetic field sensor as described in Claim 14, wherein the layer of piezoelectric material comprises at least one patterned stripe of electrically insulating piezoelectric material.

18. (Amended) A magnetic field sensor as described in Claim 16, wherein the layer of piezoelectric material comprises at least two stripes of piezoelectric material connected electrically in series.

20. (Amended) A magnetic field sensor as described in Claim 8, wherein the multilayer material comprises a read head for reading stored information on a recording medium.